

MTP Overview

Introduction

During 2009 Bioversity is undergoing its 6th External Programme and Management Review (EPMR). The EPMR is scheduled to be presented to the Science Council at its next meeting (SC12) in September and then to the CGIAR Executive Council (ExCo) in October. The recommendations from this review will therefore be implemented during this MTP (2010-12) period and the first report on progress in implementing these recommendations will be included in Annex 1 of next year's MTP. The CGIAR Change process is also expected to influence the research programme during the period of this MTP (2010-12) and these changes will be incorporated into next year's MTP for the period 2011- 2013. However there may be some adjustments in the latter half of 2010 relating to the new CGIAR Strategy and Results Framework that cannot be included in the plan at this stage.

Despite this context of ineluctable change, the 2010-2012 MTP Report represents a phase of continued consolidation, following a recent period of strategic change from 2003-2007. Previous MTP Reports have described how, following our 2003 EPMR, a major review of our mandate, roles and comparative advantages was undertaken during 2004. This resulted in the publication of our new Strategic Plan "Diversity for well-being: Making the most of agricultural biodiversity" in October 2004. To implement this new Strategy, Bioversity underwent structural reorganization, and developed a new set of fifteen E-Series Projects in 2005. In 2006, we changed our name to Bioversity International. During these years, our research and other activities underwent an initial realignment with our new Strategy, and with the CGIAR System Priorities. In 2007, our activities were further focused within our new broader research mandate, in order to ensure the necessary in-depth, high quality investment in our research priorities. This resulted in the definition of six Focus Areas, as described in an earlier MTP Report (2008-2010), and ten F-Series Projects, which were implemented from the beginning of 2008 and continue in the current plan. Full details of the research planned under each F-Series Project for 2010-12 are provided in the Project Narratives and Logframes sections and a summary of each Project is provided in the Highlights section below.

Project Summaries and 2010 Preview

Bioversity's ten F-Series Projects are as follows:

Project F01: Enhancing the contribution of agricultural biodiversity to human wellbeing

The Project contributes to the sustainable use of agricultural and forest biodiversity to improve people's well-being. The Project has two major focuses: 1) research into the interplay between agricultural biodiversity, nutrition and health and 2) identifying new biodiversity-based income options for the rural and urban poor. It is carried out through collaborative research programmes that recognize the nutrition and health role of biodiversity and enhance the income opportunities of all actors along the value chain, particularly the poor and marginalized. Through partnerships with national research institutes, civil society groups and private companies the Project investigates the role of local food systems for improved nutrition and develops value-addition strategies for local crops, strengthening local institutions and supply chains. The Project has a special emphasis on neglected and underutilized species in view of their valuable role in income diversification, and their strategic contribution to food and nutrition security. The Project serves as the institutional home for the Institutional Learning and Change (ILAC) Inter-Centre Initiative, a grant funded initiative which is hosted by Bioversity. The ILAC Initiative is both a research and support initiative which aims to increase the contribution of CGIAR research to poverty alleviation through work to improve planning, monitoring and evaluation practices and to strengthen the capacity of the CGIAR to work collaboratively in ways that enhance the contribution of research to development. Through the Project, Bioversity fulfils its charge from the Convention on Biodiversity (CBD) to jointly lead the cross-cutting initiative on biodiversity for food and nutrition (CBD/COP8, 2006).

During 2010, work will focus on assessing the nutritional value of local agrobiodiversity in three countries in Sub-Saharan Africa (Benin, Kenya and South Africa) with distinct ecosystems and food systems. This will include an

analysis of their potential to contribute to dietary diversity, human health, and household incomes and the results will be used to inform policy. An ex-ante analysis of the income generation potential of biodiversity of local horticultural and cereal species in three countries (India, Malawi and Mozambique) will also be conducted and synthesized. A knowledge portal containing resources for improving planning, monitoring and evaluation practices and for strengthening the capacity of researchers on collaborative research will also be established.

Project F02: Productivity, resilience and ecosystem services from community management of diversity in production systems

The Project is concerned with researching practices that support communities in their use of genetic diversity to maintain and improve productivity, resilience and resistance in production systems. This includes enhancing the use of crop genetic diversity to manage biotic stress in production systems; determining the linkages between genetic diversity in production systems and ecosystem services; and enhancing the management of the cultivated/wild interface to increase farmers' sustainable use of local crop genetic diversity. The Project also aims to understand better the role of seed systems in maintaining and promoting the continued evolution of available crop genetic diversity in production systems; and the social processes that empower communities and local institutions to use knowledge and tools effectively to manage and benefit from crop genetic diversity.

During 2010 work will focus on identifying a set of practices for the participatory assessment of diversity for perennial fruit species and their wild relatives linked to novel nursery management methods that use, improve, and disseminate cultivated and wild materials in three countries in Central Asia.

Project F03: Managing biodiversity to improve livelihoods in commodity crop-based systems

The Project focuses on alleviating constraints and building opportunities along the impact pathway that links the conservation and improvement of banana, coconut, and cacao genetic resources (Project F04) to impacts on livelihoods. Targeted work areas include understanding and managing pest and disease diversity, managing crop and crop-associated diversity to improve the productivity and sustainability of diverse, high- and low-input systems, and addressing deficiencies in cultivar deployment and clean seed multiplication systems. The Project develops tools for linking the stakeholders involved in crop production with those who add value to commodities post-harvest, through diverse processing and marketing opportunities. The Project also addresses the issues of assuring access to relevant information (through regional and global information services) and of building the capacity of stakeholders to work together for more effective actions. Activities include component research (for instance to understand the ecology of soil-borne diseases) with more action-oriented and participatory research focused on integrating knowledge and testing organizational models in pilot sites. These activities are carried out with advanced research and selected country partners. The network-based approach contributes to priority setting with country partners, and encourages wide exchange of experiences and innovations. National agriculture research systems (NARS) and other partners more directly linked with rural communities are supported through capacity building to manage these interventions and to institutionalize and scale-out successful interventions.

During 2010 work will focus on characterizing genetic and pathogenic variability and distribution of *Fusarium oxysporum* in Asia; and the piloting and analysis of approaches for ensuring that farmer households benefit from the value added through improved fermenting and marketing of local cacao diversity.

Project F04: Conserving and promoting the use of genetic resources of commodity crops

This Project promotes the conservation and effective use of the genetic diversity of three commodity crops of special importance to smallholders in developing countries. For *Musa*, this Project seeks to develop technologies for the effective conservation, characterization and improvement of genetic diversity. Representative materials of *Musa* diversity are brought into Bioversity's state-of-the-art *in vitro* genebank at the International Transit Center (ITC) where most accessions are held 'in trust', under the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). Collective action for the rehabilitation of Global Public Goods in the CGIAR Genetic Resources System will support more effective management of genetic resources. For coconut, the Project strengthens conservation and characterization of coconut diversity *ex situ*, in field genebanks, and on farm. It develops, evaluates and promotes the use of improved varieties and hybrids to increase farmers' yields.

For cacao, activities involve the exchange and evaluation of cacao selections on experimental stations and farmers' fields, using conventional and participatory breeding approaches, and the development and validation of tools for improved conservation and efficient selection. Members of the Global *Musa* Genomics Consortium are collaborating to advance understanding of the *Musa* genome, and especially by seeking homologies with the better-known genomes of rice and Arabidopsis, to support both conventional and transformation-based crop improvement. Additional services to *Musa* breeding are provided by the Pro*Musa* network and its specialist working groups. The Project works across commodities to provide access to information on accessions in collections around the world, including phenotypic and molecular characterization data and the results of evaluations.

During 2010, 700 virus-free ITC accessions will be field verified and 10 accessions in the International Coconut Genebank-Africa and Indian Ocean (ICG-AIO) will be safety duplicated. A global long term conservation strategy for cacao will be agreed with support from CacaoNet. Research will also focus on identifying 2 genes linked to abiotic stress and a *Musa* crop registry will be developed.

Project F05: Enhancing the *ex situ* conservation and use of genetic diversity

This Project aims to improve the *ex situ* conservation and use of agricultural biodiversity, including crop wild relatives, as a means to mitigate the impacts of global threats such as water scarcity and climate change. To harness the range of traits available among useful plant species, this diversity must be effectively collected, conserved, characterized, evaluated and made available to stakeholders who can use it to enhance the quality and quantity of agricultural products that can improve livelihoods. The Project team will work with partners, including SGRP, to collate, validate and make available best practices to help genebank curators effectively and efficiently conserve and manage their collections. Research will be carried out to develop and promote participatory, innovative and cost-effective conservation and management strategies for more efficient conservation. The Project will work with partners to develop strategies and tools for identifying useful traits among genetic resources held *ex situ*, and to develop mechanisms to promote their use in crop improvement programmes, especially for productivity, quality and resistance to biotic and abiotic stresses. Special consideration will be given to screening of crop wild relatives. The Project will support the development of core and trait-based collections in order to facilitate access to agrobiodiversity and mining for genes and alleles. Strategies and tools for developing cultivars adapted to specific conditions, including marginal areas, will be produced. The Project will achieve this through increasing collaboration between genebanks and users of materials in order to enhance the use of conserved agrobiodiversity.

During 2010, work will focus on a comprehensive assessment of collecting priorities to fill the gaps of 20 major Crop Wild Relative (CWR) gene pools. Cryopreservation protocols for coffee genetic resources will be optimized and applied to the CATIE coffee core collection, and techniques for widening the genetic base of lentil cultivars will be established. An E-learning course on use of genebank material for breeding purposes will be developed, and molecular techniques for mapping useful traits for addressing climatic changes on buckwheat and oats will be developed.

Project F06: *In situ* conservation and use of forest and other wild species

The Project aims to assess and document the diversity of useful wild species; study and make known their benefits; analyze the threats to their persistence; and provide knowledge, strategies, mechanisms and tools to facilitate conservation and sustainable use of wild species and their variation. The anticipated impacts of the Project will be improved livelihood benefits, enhanced protection of biodiversity, and more productive and sustainable managed ecosystems. F06 works with an array of partners and stakeholders in developing countries, mostly in tropical regions. The Project focuses on the wild relatives of domesticated crops (CWR), which provide genes to improve crop resistance to a range of pests, diseases and abiotic stresses; and species yielding products harvested from the wild, mainly timber and fruit trees. Through its F06 Project, Bioversity aims to provide global leadership in the research, conservation and enhanced sustainable use of intraspecific diversity in tropical tree species. Research will be undertaken on a small number of priority model tree species, selected from different forest ecosystems, with different reproductive biologies and patterns of utilization, and which are subject to different major threats. Outputs will include knowledge, practices, policy strategies, and improved capacity for conservation and management of the diversity of useful wild species *in situ* in protected areas or managed natural forests, or in plantations or restored forests or in complementary *ex situ* settings.

During 2010, work will focus on the completion of a Case study of *Prunus africana* (a model species for Afrotropical ecosystem), and conservation strategies for 3 rare Dipterocarp species in SE Asia) and four model tree species in Africa, including *Prunus africana*, will be developed and disseminated. Information materials on CWR will be developed for policy-makers including a chapter for the State of the World- Plant Genetic Resources (SOW-PGR) , and the launch of the updated global portal at the Conference of the Parties (COP10) of the Convention on Biological Diversity (CBD).

Project F07: Biodiversity informatics

This Project aims to improve the management of, access to, and use of plant genetic resources information through standardized information gathering and management; facilitated use, exchange and access; and capacity building. Biodiversity informatics plays a major role in the effective conservation and use of plant genetic resources by facilitating efficient collaboration between genebanks holding complementary collections and by enabling breeders and other users to access information on germplasm held in different genebank collections. The Project is creating a global germplasm information system in support of the ITPGRFA implementation.

During 2010, data standards, key descriptors for characterization and traits of interest will be validated for at least 20 ITPGRFA Annex 1 crops. The Systemwide Information Network for Genetic Resources (SINGER) will be integrated within the global germplasm information system and an ITPGRFA ordering module will be developed for the global germplasm information system.

Project F08: Policy and law

The Project contributes to genetic resources policy-development at global, regional, national, and CGIAR system-wide levels. These contributions mostly take the form of research products, and activities and tools to strengthen the capacity of partners to engage in policy analysis, and to raise awareness of the importance of policy-related issues. The Project's international work is conducted primarily through the CGIAR's System-wide Genetic Resources Programme (SGRP) through which Project staff represent the CGIAR at meetings of the Governing Body of the ITPGRFA, the United Nations Food and Agriculture Organization's Commission on Genetic Resources for Food and Agriculture (CGRFA), the CBD, and the World Intellectual Property Organization (WIPO). The Project's system-wide work is also provided through SGRP and the CGIAR Genetic Resources Policy Committee (GRPC), through which it coordinates development of system-wide policies and related legal instruments relevant to the management, collection and distribution of genetic resources for food and agriculture (GRFA). At regional and national levels, the Project supports partners in participatory research (and related capacity-building) to develop policies which encourage uses of GRFA to assist the poor and by extension, conserve diversity in agricultural systems. In the coming years, emphasis will be on developing laws, policies, practices and legal instruments to support development of the global system of conservation and use of plant genetic resources, and (less so) issues concerning management of farm animal and agricultural microbial genetic resources.

During 2010, work will focus on preparing technical inputs and policy analyses for the 9th meeting of the CBD's Working Group on Access and Benefit Sharing, COP10, and for expert meetings organized by the Secretariats of the ITPGRFA and the CGRFA. A compilation of research papers on farmers' rights concerning farmers' varieties will be published as a book and draft policies, laws, partnership agreements and administrative guidelines on the implementation of the Treaty will be produced. These research papers and capacity building tools relate to the implementation of access and benefit sharing norms and support for farmers' informal systems of innovation in harmony with the International Treaty and the Convention on Biological Diversity. The results of a comprehensive literature review and expert group's analysis of methods and indicators to study the impact of intellectual property rights and seed laws on the conservation/erosion of PGRFA will be documented. System wide policies and legal instruments related to the management of GRFA will be developed and put into practice (SGRP), including those concerning the acquisition and distribution of plant genetic resources for non-food/non-feed uses. A book providing a review of the effectiveness and governance of the 'Global Crop Commons' with a particular focus on the Treaty's multilateral system of access and benefit sharing will also be published.

Project F09: Strengthening global systems for conservation and use of genetic resources

The Project contributes to the development of more effective global and regional collaboration on conservation and use of agricultural biodiversity. It supports the further development of international programmes, plans and initiatives that are part of global systems of conservation and use of genetic resources. It has three main elements, the first of which is analysis to determine strengths and weaknesses in existing global systems, opportunities and mechanisms for improved collaboration, and improved regional and global conservation strategies. Secondly the Project provides inputs to global and regional processes, organizations and networks to ensure appropriate recognition of agricultural biodiversity conservation, including appropriate awareness raising and capacity building activities. Thirdly it supports various organizations and mechanisms, such as networks, that support global conservation systems. Through the Project, Bioversity discharges its responsibilities as convening Centre of the SGRP; and in partnership with FAO, it provides support for the Global Crop Diversity Trust (the Trust) and it also hosts the Platform for Agrobiodiversity Research (the Platform). The Project includes initiation and coordination of regional collaborative actions to facilitate the implementation of regional strategies and policies at national level.

During 2010, work will focus on the preparation of analyses of the initial implementation of regional PGR conservation strategies in all the implementing regions; and the delivery of a series of indicators and results of case studies for describing the state of agricultural biodiversity to Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA17), COP10, CGRFA, to show the extent to which 2010 indicators have been achieved. Further analyses, identification of research gaps, improved collaboration and capacity development needs will also be made available through the Platform in one new area of agricultural biodiversity maintenance and use. An Agricultural Biodiversity Initiative for Africa (ABIA) will be launched under the aegis of the Forum for Agricultural Research in Africa (FARA) with Bioversity support. Work will also focus on the preparation of techniques and practices for the conservation and management of plant genetic resources collections within and outside the CGIAR System and a sustainability plan for CGIAR genebanks.

Project F10: Status, trends and valuation of agrobiodiversity

Knowledge of the extent, distribution and value of genetic resources is central to improving the sustainable conservation and use of agricultural biodiversity, as recognized by international initiatives such as the CBD, Global Plan of Action on Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture (GPA-PGRFA), the Global Plan of Action for Animal Genetic Resources (GPA-AnGR) and the ITPGRFA. This information is required by the parties to the CBD and other initiatives to reduce the rate of agricultural biodiversity loss and to fulfill their national and international obligations. This new Project aims to assess the status, trends and values of agricultural biodiversity at the genetic level, and to provide a mechanism for long-term monitoring of genetic erosion. The Project will develop standard methodologies and indicators for genetic diversity assessment, and develop prediction models to study the trends of biodiversity change. It will work with partners to demonstrate their application with case studies at the national and regional levels for a number of target crops and livestock, and at the global level for CGIAR mandate crop and animal species. In addition, the Project will assess and develop tools for the economic valuation of agricultural biodiversity in order to improve decision making regarding the efficient allocation of resources to plant and animal genetic resources conservation and sustainable use, and improve awareness of agrobiodiversity among NARS. The Project will also assist in enhancing the capacities of NARS to monitor the status and trends of diversity, and will contribute to implementation of the international conventions and treaties.

During 2010 activities will focus on the planning, funding and establishment of this relatively new Project and the development of a set of indicators for monitoring agricultural biodiversity in *ex situ* collections.

Bioversity is also the convening Centre for the CGIAR System-wide Genetic Resources Programme (SGRP):

SGRP joins the CGIAR Centres in a partnership whose aim is to maximize collaboration in the management of genetic resources and in the production of knowledge, technologies and information for enhancing the conservation and sustainable use of agricultural, forest and aquatic biodiversity. Centres are assisted to effectively conserve, study and promote the use of genetic resources in ways consistent with the CBD, the ITPGRFA and other relevant international policies and plans. SGRP seeks to ensure that genetic resources

olicies and practices are consistent with international policies and norms and to further System-wide representation and contributions in international technical and policy-making fora and processes concerning the environment and development. SGRP catalyzes collaboration among Centres and partners to generate knowledge and technologies through research and to capture existing information and knowledge. The inter-Centre Working Group on Genetic Resources (ICWG-GR) acts as the Steering Committee for SGRP and is comprised of representatives of Centres, FAO and the ITPGRFA Secretariat. Bioversity, as the convening Centre for SGRP, has responsibilities for hosting SGRP Secretariat, SGRP Coordination and representation, management of SINGER, and provision of policy and public awareness support through Projects F07, F08, and F09.

Through SGRP, the individual CGIAR Centres have 15 years of practical experience in conceiving and implementing collaborative inter-Centre approaches to research and development activities in the area of genetic resources. It is the intention of SGRP to contribute and build upon this experience in 2010 as we align our activities with the programmatic and administrative changes currently underway in the CGIAR, for the purpose of enhancing the Centres' and partners' contributions to the mission and objectives of the revitalized CGIAR through more effective and efficient management of genetic resources system-wide.

New and Terminated Research

As mentioned above this MTP Report represents a phase of continued consolidation, following a recent period of strategic change, and therefore there is only a limited amount of terminated and new research to report.

Terminated research:

For F02 research on the rehabilitation of degraded landscapes in CWANA will end in 2009. For F05, a major project on establishing best practices of genebank management of specific crops and the creation of an online knowledge base on crop genebank management will have concluded in 2009. The major outputs of this project include best practices for nine CGIAR mandate crops (banana, barley, cassava, chickpea, forage grasses, forage legumes, maize, rice and wheat). The results will be made available as a global public good on the SGRP website at www.cropgenebank.sgrp.cgiar.org. In addition crop specific regeneration guidelines for 21 different crops, listed on Annex 1 of the International Treaty for Plant Genetic Resources for Food and Agriculture, have been produced in 6 different languages and are available on CD-ROM as well as are accessible from the Crop Genebank Knowledge Base. For F05, a major effort has also been to study the completeness of germplasm collections in the global system, and identify the gaps that exist for targeted collecting. This effort looked at both cultivated materials and crop wild relatives, and used a variety of statistical approaches to analyze completeness, and biologically and geographically to identify the gaps in the global system.

New research

For Project F03 a new research activity has been initiated for delivery in 2012 on the improvement of *Musa* production in mixed perennial systems in Latin America with applicability in Africa and Asia. For F09 additional research involving meta-analysis of the effectiveness of international collaboration has been initiated. An Associate Professional is expected to join the organization during 2009 to support this work. For F05, in the light of the best practices and regeneration work described above, a new research project is in development to address the problems identified with regard to the regeneration of difficult materials especially genebank accessions of wild species (crop wild relatives). Also low cost drying techniques for developing countries will be the subject of new research.

Slower than Expected Progress in Previous MTP

The 2009 Output Targets planned in the previous MTP 2009-2011 are all on track.

Some Output Targets previously planned for 2010 and 2011 have been rescheduled such as for Project F03 for Output 1 the Output Target for 2010 on on-farm management of *Fusarium* has been moved back to 2011; and for Output 3 the Output Target on the strengthening of farmer organizations to start up and manage processing

and marketing businesses has been moved back to 2012; and for Output 4, the Output Target on network-based research and development priority setting has been moved back to 2011.

Changes in Collaborative Arrangements

A new international organisation called 'Crops for the Future' has evolved from a union of the International Centre for Underutilised Crops (ICUC) and Bioversity's Global Facilitation Unit for Underutilized Species (GFU). It is hosted in Malaysia by Bioversity International in a joint venture with the University of Nottingham, Malaysia Campus and a hosting agreement will be signed later in 2009. Other key partners for Crops for the Future will include experts from universities, national research systems, NGOs and the private sector, relevant CGIAR Centers and global networks such as GlobalHort and the Non-Timber Forest Products (NTFP) Global Partnerships Programme. This represents a new and strengthened collaborative arrangement for Bioversity International in the area of underutilised species research. The new organisation will also help to promote stronger partnerships with the sectors of education, nutrition, climate change, and sustainable environment. Partnerships with the food industry are also envisaged, especially with respect to marketing of new products.

Other CGIAR Centres are also key partners, and unchanged collaborative arrangements with them include co-founding and participating in the Generation Challenge Programme (CP); participating in the Harvest Plus CP; coordinating one of the research sites of the SSA CP; providing research and policy materials to the Water and Food CP; hosting and coordinating the System-wide Genetic Resources Programme (SGRP); participating in other Systemwide and Ecoregional Programmes (SWEPs), such as the System-wide Programme on Integrated Pest Management (SP-IPM), and the Collaborative Research Programme for Sustainable Agricultural Development in Central Asia and the Caucasus (CAC), and the System-wide Programme on Participatory Research and Gender Analysis (PRGA). Bioversity also hosts two System Office Units, namely the Central Advisory Service on Intellectual Property (CAS-IP), and the Information and Communications Technology and Knowledge Management (ICT-KM); and the inter-Centre Initiative on Institutional Learning and Change (ILAC). Bioversity is also a member of the Amazon Initiative and the systemwide programme on Collective Action and Property Rights (CAPRI). Bioversity has been an active contributor to both the East and Southern Africa, and the West and Central Africa, Collective Actions.

Collaboration continues with the Generation CP by providing a link to the plant genetic resources collections held by the Centres and coordinated involvement of genetic resources managers and information specialists; involvement in the informatics activities through SINGER; links to activities on germplasm characterization; and collaboration in studies on the management of genetic and genomic collections through SGRP. Collaboration with the Generation CP also occurs through Project F09 by providing a conduit to the plant genetic resources collections held by the Centres, and a coordinated involvement of Centre genetic resources specialists; through Project F08 on policy work; through Project F07 on informatics; through Project F04 on *Musa* genotyping, development of genome resources, comparative genomics and bioinformatics platform for *Musa*, bridging the web site of the Global *Musa* Genomics portal with the *Musa* Germplasm Information System (MGIS); the development of a prediction function tool based on an orthologous database; and connecting genomic data to the Generation CP platform. Collaboration with the Generation CP for coconut research involves the development of a coconut portal including phenotypic and molecular data. Bioversity contributes and/or leads many multi-partner collaborative research activities including those on Crop Wild Relatives (Project F06), *In situ* Conservation of Fruit Trees in Central Asia (Project F01), Biodiversity and Managing Pest and Diseases (Project F02), Empowering Sahelian Farmers (Project F01), Neglected and Underutilized Species (Project F01), and numerous networks on plant and forest genetic resources.

Full details of all the hundreds of research partners involved in Bioversity's research, including an explanation of their complementary advantage, and the many partners involved in upscaling and disseminating, are available on request.

Alignment with System Priorities

The Financial Tables show the resources allocated to each System Priority. As a result of refocusing our efforts, a total of 94% of resources are spent on contributing to the System Priorities. The balance of 6%, representing US\$ 2.296 million, is spent on Non-System Priority activities.

As would be expected, Bioversity's work is very much focused (57%) on Priority Area 1 "Sustaining biodiversity for current and future generations", and in particular Priorities 1A (staple crops) and 1B (under-utilized crops). Some 36% and 18% of total resources are allocated to System Priorities 1A and 1B respectively. Policy work on conserving livestock (1C) and aquatic animal (1D) genetic resources also account for 2% and 1% of resources respectively.

Priority Area 2 "Producing more and better food at lower cost through genetic improvement" accounts for 8% of Bioversity's resources, largely through genetic improvement of bananas and plantains.

In Priority Area 3 "Reducing rural poverty through agricultural diversification and emerging opportunities for high-value commodities and products" we invest 3% of resources in System Priority 3A (fruit and vegetables), much of it through our work on wild species.

Priority Area 4 "Poverty alleviation and sustainable management of water, land and forest resources" accounts for 9% of our resources. This is due to our work on global and regional forest genetic resources networks, which contributes to System Priority 4A (integrated land, water and forest management); and some of our work on commodity based systems which contributes to System Priority 4D (sustainable agro-ecological intensification).

A total of 17% of resources are allocated to Priority Area 5 "Improving policies and facilitating institutional innovation to support sustainable reduction of poverty and hunger". System Priorities 5A (policies and institutions), 5C (rural institutions and their governance) and 5D (research and development options) are of particular interest, and account for 7%, 4% and 6% respectively of our resources.

Non-System Priority Activities

A total of 6% of Bioversity's resources are allocated to Non-System Priority activities, 4% on "new research", and 2% on "development activities". No "stand-alone training" is supported, all capacity building activities being directly linked to research activities.

The Non-System Priority "new research" includes research into the nutritional properties of underutilized species under Output 1 of Project F01; the use of biodiversity to manage pest and diseases under Output 1 of Project F02; the collection of beneficial soil microorganisms, and more effective processing and marketing of commodity crops, under Project F03; and the valuation of diversity under Project F10.

Community-level work linked to the development of decision-making tools, and the processing, marketing and dissemination of commodity crop products under Project F03, are best described as development activities; as is some community-level work linked to the nutritional properties of underutilized species under Project F01.

Center Financial Indicators

From a financial perspective, 2008 allowed Bioversity to maintain its financial health. The organization recorded an operating surplus of \$182 000. This has enabled Bioversity to retain our reserves at 82 days. This is within the CGIAR recommended minimum range of 75-90 days.

For the other three financial indicators Bioversity meets the CGIAR norms. The organization's liquidity reserve level of 120 days at the end of 2008 remains in line with the CGIAR recommended range of 90/120 days. We intend to maintain our liquidity levels at the 120 day level for 2009 and 2010. Bioversity had an indirect/direct cost ratio of 18.9% for 2008. It is the intention of the institute to maintain our indirect/direct cost ratio at this level for 2009 and 2010. Our donor receivable/payable ratio was 0.81 at the end of 2008. Bioversity intends for this ratio to remain at this level in both 2009 and 2010.